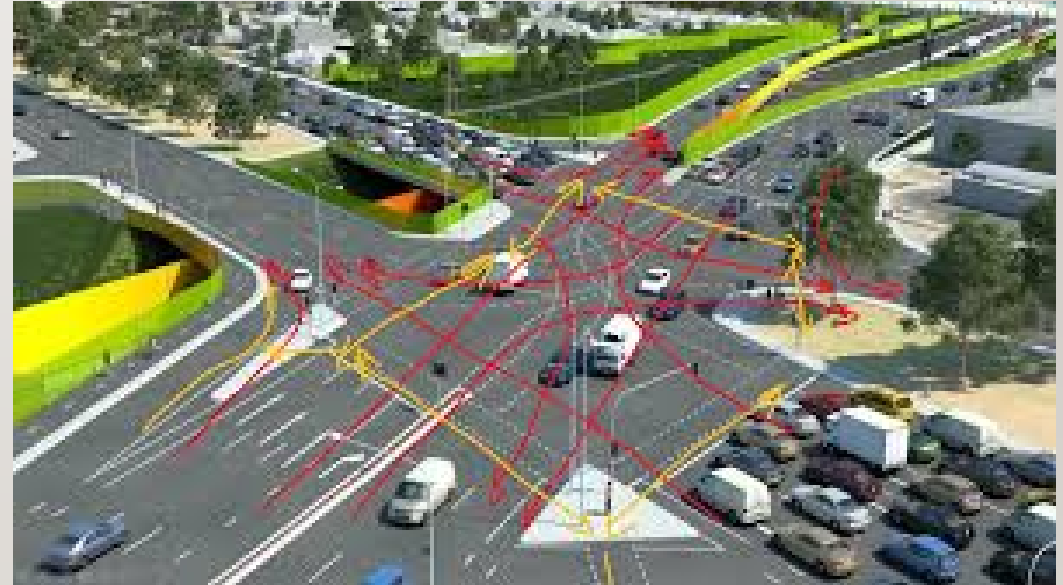


DATA COLLECTION: THE NEED, THE GAP AND THE FUTURE

MR LACEY WILLIAMS



NEED

01

Situational
Assessment and
Problem
identification

02

Validation

03

Performance
measurement

AXLE LOAD SURVEY – CLAUDE NOEL HIGHWAY



	Number of ESALs					
Segment	Location 1 Original Estimate	Location 1 Measured Optimistic	Location 1 Measured Pessimistic	Location 2 Original Estimate	Location 2 Measured Optimistic	Location 2 Measured Pessimistic
Westbound	4,585,700	2,620,154	719,573	3,943,800	2,253,600	619,121
Eastbound	4,201,630	2,403,811	660,159	4,081,050	2,332,029	640,667
Total	8,787,330	5,023,965	1,379,732	8,024,850	4,585,629	1,259,788

RESULT

Reduction in pavement thickness

Reduction in overall project cost

More efficient use of physical resources



RED LIGHT RUNNING



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- Several jurisdictions in the US turned off RLRCs
 - IHS determined that fatal crashes due to RLRCs up by 30% (IIHS, 2016)

SPEED CAMERAS

The southbound lane of Kenilworth Avenue in D.C. serves mostly as a busy feeder onto Interstate 295 or Benning Road NE. But it also serves to boost the District's bottom line — the speeding camera positioned at its 600 block generated more than \$20 million in fines in fiscal 2016.

Source: [Andy Medici](#) – Staff Reporter, Washington Business Journal, April 2017.

SPEED CAMERAS (*CONTINUED*)

- 33% of speed violations > 15 miles per hour over the speed limit
- Speed change from I-295 to Kenilworth Street 50 mph to 25 mph then to 35 mph
- Pedestrian struck and killed on November 25, 2017
- Residents' concerns that cameras did not improve safety

Source: Speed Cameras in D.C., Simone Roy, June 28, 2018

DUMFRIES INTERSECTION

Options for Upgrade

- Turbo Roundabout
- Three-lane Roundabout
- Elevated Roundabout
- Interchange



THE GAP

- Lack of information to make informed decisions
- Recent efforts at collection on a project specific basis
- Inability to determine trends and critical metrics e.g. Increase in VMT, Travel Time, etc at National Level
- Assessment of implemented initiatives

SPEED RIVULET ROAD

Speed								
Speed limit:			50km/h					
85th Percentile Speed:			81 km/h					
Average Speed:			68.2km/h					
		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Count over limit		13,491	9,689	10,713	10,966	11,300	8,861	6,840
% over limit		94.2	88.6	92.3	93.4	93.9	98.4	99.5
Avg speeder		67.9	67.5	67.3	67.9	68.9	74.0	78.6





SOURCE: CNC3







THE FUTURE

- Big data
- Wayfinding services
- Connected vehicles and smart cities

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- All facets of the transportation sector must be measured
 - Data collection strategies must have clear objectives and must be in line with the objectives of the intended intervention
 - Early identification of issues and resolution of problems

THE FUTURE

- Connected vehicles and smart infrastructure in support
- Trial run including 27 signalized intersections in northern California
- Big data – Waze, Google Maps, In-pavement sensors



CONCLUSION

MEASURE!!!